THE TREATMENT

OF

CANCER OF THE UTERUS.

BY

W. H. BAKER, M.D.,

Instructor in Gynecology, Harvard University.

Reprinted from THE AMERICAN JOURNAL OF OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN, *Vol. XV., No. II., April*, 1882.

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(With four woodcuts.)

I would offer no excuse for the preparation of this paper. The great importance of the subject, the want of familiarity in the profession at large with its early diagnosis and treatment, and, more than all, the terrible suffering, both mental and physical, which it has been my lot to witness, have combined to interest me in this dreadful malady, and awaken a strong desire to help its most grievously afflicted victims.

It was my fortune to be House Surgeon at the Woman's Hospital in New York when Dr. J. Marion Sims and Dr. T. G. Thomas were doing so much for cases of this class. I say "doing so much," because the combined work of two such surgeons, could it have been encouraged or even allowed to go on, must inevitably have resulted greatly towards perfecting means for cure. Most unfortunately, the Governing Boards of the Hospital saw fit to exclude from it entirely all cases of cancer of the uterus.

Dr. Thomas was then (1872 and 1873) working with the galvano-caustic wire, drawing down the cervix, and removing a

funnel-shaped piece of its supra-vaginal portion. Dr. Sims was doing the same thing with the uterotome, scissors, and cutting curette, with the subsequent application of styptic cotton. Both were obtaining fair results. From the AMERICAN JOURNAL OF OBSTETRICS for July, 1879, we learn that Dr. Sims saw the necessity of destroying more tissue than he was able to do at the primary operation, and that to this end he applied chloride of zinc on cotton to the funnel-shaped cavity upon removing the styptic iron cotton.

After settling in Boston, it was three years before I saw a case of cancer of the uterus, although from my connection with the Boston Dispensary and the Free Hospital for Women (which through the kindness of the public I was enabled to establish in 1875), and in my private practice, I had abundant opportunity to observe uterine cases of all sorts. At the end of that time, however, three cases came in one week; and since then, there has certainly been no lack of material from which to study this special disease.

The first case upon which I operated was referred to me by Dr. W. C. Holyoke, and was an admirable one for operation. The disease was wholly confined to the infra-vaginal portion of the cervix, and was most readily removed with the scissors. As a safeguard against its return, I removed, as well, a portion of the supra-vaginal cervix. So sure was I of the entire removal of the disease, that I closed the wound with silver sutures as in an ordinary amputation of the cervix. The disease returned by the side of the cicatrix within two months, and the patient died within a year. It was then that I determined upon the operation which I have since followed, and which I believe to be superior to any which I have seen described; not differing so much from *parts* of other operations, but uniting the advantages of several, and discarding their objectionable and even their less important features. I should divide all operative cases into two classes: 1st. Those where the disease is limited to parts which can be entirely removed. In these cases, I should hope to cure, or at any rate give a long respite from the disease. 2d. Where the disease has so infiltrated the parts about the uterus that it is impossible to remove more than its superficial and most vascular portions, as a relief from frequently recurring hemorrhages or from sloughing tissue, not only highly offensive to the patient, but deleterious from its septic influence.

The operation must, therefore, differ materially under the conditions just described. Yet it is not an easy matter always to determine the extent of the disease; for the vagina may be so filled with its mass that until some of it is removed it is impossible to know whether the vagina upon either side, in front, or behind be implicated. Again, unless we can obtain the most perfect coaptation of the hand and finger in conjoined manipulation, or can seize the cervix with the volsellum, and thus test the degree of fixation of the uterus, we may be unable to decide whether there be an extension of the disease into the cellular tissue of the broad ligaments or to any of the lymphatic glands, so abundant about the uterus. Or, again, how can we be sure, except as the operation progresses, how far up the canal of the cervix the disease has extended, or whether it has not already encroached upon the body of the organ? I can truly say that I know of no operation that the gynecologist is called upon to perform which requires so much boldness, skill, readiness, patience, and good judgment as this; and, in its performance, each or all of the qualities mentioned may be taxed to the utmost.

If the case be suitable for operation and belong to the first class described, and if, fortunately, the disease be limited to the cervix uteri, as in the diagram, Fig. 1, the patient being etherized and placed in the Sims position, the cervix is seized with the volsellum forceps and dragged down as nearly to the outlet as possible. This not only facilitates manipulation, but diminishes, in fact almost entirely checks, the hemorrhage which otherwise may be alarming. The portio vaginalis is then cut into anteriorly with the scissors, and the supravaginal cervix anteriorly is separated from the bladder with the scissors, aided by the forefinger in tearing the tissues. This part of the operation is similar to Schröder's for the removal of the uterus by the vagina.

The same incision is then made into the vagina posteriorly, and the supravaginal cervix separated from the peritoneum up to the level of the internal os uteri. Thus it will be seen that the peritoneum is not purposely opened in an uncomplicated case, as is done by Schröder's method. But the peritoneum is closely attached to the uterus at the level of the internal os, and it may accidentally be cut into, which has been my experience in two instances. The anterior and posterior incisions being now

connected by lateral ones, and the supravaginal cervix separated on the sides in the same manner as was done in front and behind, the uterotome is to be substituted for the scissors, and a funnel-shaped portion of the body of the uterus cut out, as represented in the diagram, Fig. 1, B B to C. This step of the operation is like Sims', with the exception that here it is possible to remove more of the body of the uterus, because here the angle B C starts from the level of the internal os uteri at the junction of the peritoneum to the body of the uterus, both before and behind, and the apex of the cone removed extends nearly or quite to the fundus of the uterus; whereas, following Sims' method, the base of the cone is at A A, and a portion of the supravaginal cervix and more of the body of the uterus must be left.

FIG. 1.

It is thus possible to remove the entire cervix, both infra- and supra-vaginal, and at the same time nearly or quite one-half of the body of the uterus, and that the most important half; for cancer of the body of the uterus, whether of primary origin or of extension from the cervix, affects the glandular structure first, and by the method I have described, this, its natural habitat, is removed or destroyed. It is in the connective tissues which so predominate in the cervix that the disease there develops so readily, and this, it has been seen, is entirely removed. The actual cautery, at a red heat, is then applied to the whole denuded surface. This part of the operation takes considerable time;

for, as the traction is relaxed, there is likely to be more or less hemorrhage, and it often requires much patience to apply the cautery thoroughly enough to each and every bleeding point to feel secure in putting the patient to bed without tampon or other dressing to control hemorrhage. It is possible to accomplish this, however, and it is a very great gain in the subsequent treatment of the patient. The operation can seldom be done in less than half an hour, and will frequently require from three-quarters of an hour to an hour.

So long as the disease has not touched the rectum, we may still hope to remove it entirely, as I have done in three instances, even though it has implicated the whole thickness of the vaginal membrane and submucous tissue quite to the peritoneum posteriorly over a large surface. The operation must differ from that just described, in that the incision into the vagina posteriorly must be made a full quarter of an inch beyond the line of any infiltration, and extend quite through into the peritoneal cavity, removing the whole of the upper vagina with the supravaginal cervix. Before applying the cautery, the edge of the healthy vagina should be stitched with silver sutures to the lower part of the posterior wall of the uterus. So, too, if the anterior vaginal membrane be implicated in the disease, it may be dissected off the bladder. If the base of the bladder itself even be affected, so long as the ureters are not involved, we may cut away a large part of it, if we can thereby remove the entire disease, closing the fistula thus formed with silver wire before using the cautery.

The after-treatment consists in perfect quiet in bed and the use of the catheter if the patient be unable to use the bed-pan without straining. If the catheter be necessary, it should be used each six hours, as much vesical distention may stretch the cauterized surface sufficiently to induce secondary hemorrhage; or, later on, as the slough from the cauterization separates, the bladder, lacking the support afforded it by the vaginal membrane or the supravaginal cervix, may suffer rupture at this part.

A nourishing liquid diet is desirable for a few days, or until all danger of pelvic peritonitis has passed—a complication which very rarely occurs. It is seldom necessary to give opium, except for its constipating effect. This it is desirable to secure for a week or ten days even, as there is danger of rupture through

into the peritoneal cavity and of secondary hemorrhage, from the dilatation caused by the passage of feces down into the rectum, and from straining in the effort to expel them from it.

If the rectum becomes distended with gas, as is oftentimes the case, the rectal nozzle of the ordinary syringe, or even the long rectal nozzle carefully placed, should be used. There is seldom much or any pain complained of after the operation, the application of the cautery apparently destroying the sensibility of the parts. Of course, if pelvic peritonitis arise, it must be treated by the free administration of opium, as in other instances. The temperature and pulse seldom rise above a hundred, and more often the temperature remains at 99°. The patient should remain in the recumbent position in bed for two weeks, as it is unwise to bring any abdominal pressure on the parts until cicatrization is pretty well established. After convalescence, the patient must be thoroughly examined with the speculum each month for the first six months, and then each two or three months for several years. If any little outgrowths appear, they should be removed, as advised by Dr. Sims in his admirable paper already referred to, with the sharp curette. Instead of the subsequent application of chloride of zinc suggested by him, I should use the thermo-cautery as in the primary operation. I do not consider the internal exhibition of arsenic or other alteratives of much importance, and have seen no greater progress in cases thus treated, not even when watched most closely, as has been done in the ward at the Free Hospital for Women exclusively devoted to cancer of the uterus.

In the second class of cases, where operative interference is resorted to for relief from hemorrhage, or to remove a mass of sloughing tissue, the disease having involved those parts which fix the uterus, the curette should be used as recommended by Dr. Sims, but is best followed by the thorough use of the thermo-cautery.

In looking through my record books, I find the histories of forty-seven cases of uterine cancer treated in the past four years. This includes the cases treated in my private and public hospitals, but not those treated at the Boston Dispensary, of which I have retained no record. Of these forty-seven cases, twelve were operated upon, and the hope entertained that the entire disease had been removed. In two of the twelve, the diseased cervices were removed with scissors and uterotome, and the

wound closed with silver sutures. In one case, the disease returned after two months, the patient dying in seven months: in the other, it returned almost immediately, and the patient died in fifteen months. One other of these twelve I am permitted to include here, by the kindness of Dr. M. A. Morris, of Charlestown, whose immediate patient she was. I saw the case in consultation with him and was present to suggest the steps of the operation, which were most skilfully carried out, and consisted of the amputation of the intravaginal portion of the cervix, the removal of a conical portion of the supravaginal cervix, and the thorough application afterwards of the thermo-cautery.

This patient is still living and enjoying good health after a period of four years, although I understand from Dr. Morris that within two or three months there have been some signs of recurrence. In the remaining nine cases, the operation, as previously fully described and figured, was done: and the result has been a return of the disease in one case after nine months, the patient refusing to have anything further done; in another, the disease showed itself in the lumbar and iliac glands, and the pancreas, and finally returned in the uterus. The patient died in three months from the time of the operation. The remaining seven are living and well, after periods of twenty-nine, twenty-seven, twenty-two, twenty-one, eighteen, eighteen, and eleven months respectively. There are then nine living out of the twelve where it was hoped the disease had been removed. Of the three patients who died, one was unwilling to follow up the treatment which certainly promised as much for her as for any of those who survive. In the other two cases, the operation was only very partially done and no application of the thermo-cautery made.

Of the thirty-five cases remaining of the original forty-seven, ten were operated upon simply to ameliorate the symptoms from which they suffered. With these also I have taken the liberty to include a patient of Dr. H. E. Marion, of Brighton, upon whom he operated. Although not present at the operation, I saw the case several times in consultation with him, and had charge of it for a short time during his absence; and also one which Dr. W. E. Boardman assumed charge of, as I was just leaving the city at the time of the operation, at which I had the pleasure of assisting him. There was no hope entertained in any of these cases that a long respite could be secured,

as the disease could not be wholly removed. Yet, in one of them, by repeating the operation three times at intervals of some months, the patient lived three years and five months, and was kept frēe from many of the sufferings which make life so intolerable with this malady.

Of the remaining nine, six lived, eighteen, ten, nine, eight, seven, and seven months, respectively. Two are still living, after periods of twelve and eight months, and the other one was discharged from the Free Hospital for Women four months after the operation, and I have since been unable to learn her condition.

Of these ten cases, six were operated on once; two, twice; one, three times; and one, four times. Five of the ten were cases of cancer of the body of the uterus, being the only ones in the whole forty-seven where it was not almost certain that the disease began in the cervix uteri; in these five cases, however, the cervix was not affected, except in one instance, and that late in the progress of the disease. In three of the five, when first seen, the body alone was affected; there being no evidence whatever of disease in other parts. It is to be regretted that in these three cases gastrotomy was not performed, with removal of the body of the uterus, making a pedicle of the neck, after Péan's method for removal of the uterus for fibroids. It might have given the patients a better chance. In these cases of cancer of the body of the uterus, the operation done was removal of as much of the disease as was possible by the curette alone, or by the curette followed by a thorough application of pure nitric acid to the whole interior.

We have thus accounted for twenty-two of the forty-seven cases, twelve having been operated on with the hope of cure, and ten for the relief of some distressing symptom. Of the remaining twenty-five, many refused any surgical interference, although, on account of the foul discharge from sloughing tissue or of hemorrhages, there was every reason to think their condition could be made more comfortable. In some cases, there was no discharge of any kind, pain being the prominent symptom. As this could, in a measure, be controlled by opium, the necessity of an operation was not urged. Some were so advanced in years, being over seventy, that any operation was thought inadvisable. In no single instance in the whole number of cases, where there was any hope of removing the entire dis-

ease, was the operation refused; and, although the surgical procedure was oftentimes severe, death in no instance followed as its result: and only twice was pelvic peritonitis present as a complication. Many of those who refused operation were willing to try the internal exhibition of medicines, and both Chian turpentine and arsenic were faithfully tried; but I failed to see the slightest beneficial effect from either.

From the foregoing summary of cases, we have found that in less than twenty-five per cent only was there any possibility of removing the entire disease when the patients first came under observation. As the disease in forty-two of them began with the cervix uteri, a specular examination, had it been made earlier, must certainly have revealed its presence. From a careful study of the histories of these cases, the following causes present themselves as prominent for delay in this matter:

1. The reluctance of the patient to consult her physician for fear that an examination may be necessary; and her great shrinking, through delicacy or through fear of being hurt, from this means of determining her condition.

These fears the physician can overcome in a great measure; for, if his manner be not only kind and tender, but dignified; if his patients see that he respects and is careful to guard their keenest sense of delicacy, and, more than all, to protect them from all exposure, he will enable the most sensitive patient to consult him freely.

Nor can he be too careful to spare her physical pain during his examinations. He should remember, as he introduces the Sims speculum, that the parts he is touching are naturally highly sensitive, and that, under the influence of disease, they become much more so. Let him then proceed slowly and gently, being most careful to avoid the cervix with the point of the speculum, if, in the digital examination, the cervix was the part found to be affected. This may readily be done with the patient on the side, and the point of the Sims speculum retracting to its full extent the posterior vaginal wall. An examination can usually be thus completed without pain to the patient, and without causing any flow of blood by touching the diseased mass, even though, as is often the case, it may largely fill the vagina.

2. From the absence of any marked symptom, the patient

may be wholly unaware that any trouble exists until the disease is far advanced. This is well illustrated by the following case:

In September, 1876, I was consulted by Mrs. J. F., aged forty-four years, who was married to her first husband when twenty-one, and to her second when forty-one. She had had six children and two abortions. She was a strong, healthy-looking woman, without the slightest appearance of cachexia. Her menstruation, which first appeared when she was thirteen years old, had been regular and normal, with the exception that when due eight weeks before, it did not appear; but, when nearly time for its appearance again, she had been suddenly taken with flowing, the blood being quite bright and free. This had continued for

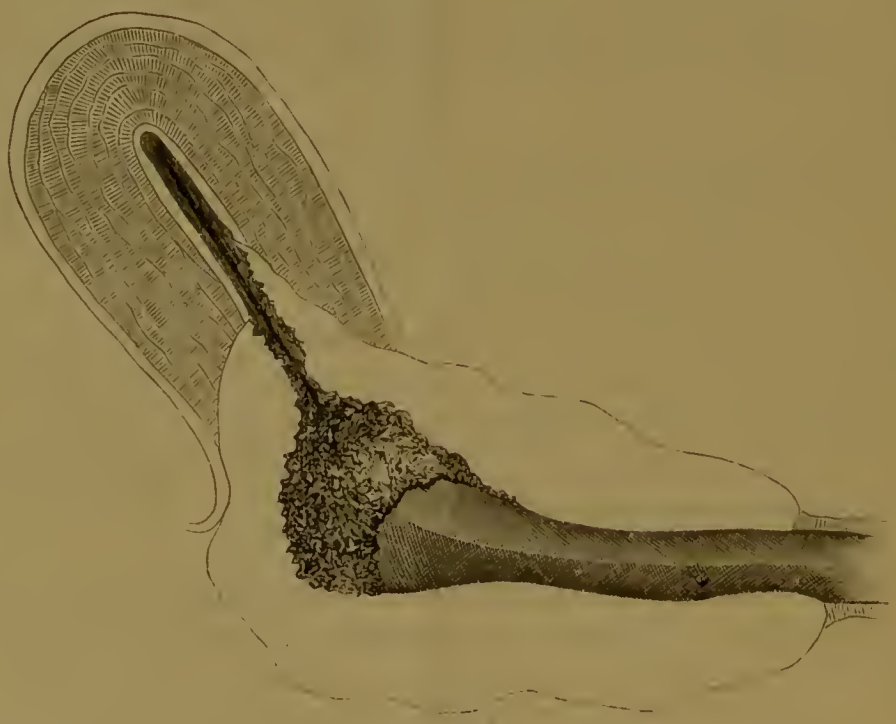

FIG. 2.

three or four days at a time for a month, or until she saw me. She had had no pain of any kind before the hemorrhage, nor did it make its appearance until two weeks before coming under my notice. During these two weeks, however, she had suffered more or less pain of a grinding character through the hips and lower abdomen. After the hemorrhage, there had also been a thin, watery discharge, which had become offensive within a few days only. Examination revealed the cervix entirely ulcerated away, leaving a large excavation into the uterus. The anterior vaginal wall was largely destroyed, but no perforation of the bladder had occurred. The posterior vaginal wall was thoroughly infiltrated with the disease. No treatment was advised save the local application of nitric acid and vaginal injections of carbolized water.

The patient died within three months from the time when first seen by me. The extent of the disease can be better judged of by the accompanying diagram (Fig. 2).

In this case, there was nothing to excite the slightest apprehension on the part of the patient until the appearance of the hemorrhage; and yet the disease must have been progressing for some months. It is not probable that such an amount of destruction as was found could have occurred in four weeks. It may be that symptoms are sometimes present and that the patient, accustomed, as she may have become, to suffering pain during the years of her menstrual life, to excessive or irregular menstruation, or to leucorrheal discharges which, being retained, have become foul, attaches no importance to them and is excited to no alarm. She therefore delays seeking the aid she so much needs.

3. Much valuable time is often lost by the reluctance of the physician to make a careful examination with the speculum. I have been repeatedly told by physicians that, although the patient had complained of more or less pain in the uterine region, or of irregular hemorrhages, yet they had thought them of little importance, had prescribed a tonic or astringent vaginal injection, thinking the symptoms due probably to the climacteric period; or that they disliked to have anything to do with uterine cases, and hence had made no physical examination of the case until specially requested so to do by the patient or by some member of her family; or yet again that they had not the conveniences or necessary instruments for doing it properly, and had therefore tried in every other way to improve the patient's condition in the hope of avoiding the necessity for such procedure. All these reasons seem to us most worthless and unsound. We can understand why, in the case of a young maiden, we should defer, for a time at least, a physical examination until other means of recovery have been tried. But fortunately this is not usually a disease of girlhood; and, even if it were, is there any reason why we should not administer ether and do our whole duty by the patient who intrusts her health, or it may be her life, to our care? If the physician feels himself incompetent to make the necessary examination, or has not the requisite instruments, let him early call to his aid some one who has the essential knowledge, skill, or implements. The practitioner is greatly to be blamed who postpones the necessary means of

diagnosis from inattention to early symptoms or from a shrinking from the measures indispensable to the determination of their significance.

4. Want of familiarity, among many of the profession, with the early appearance of the disease. A mistake in diagnosis is very unlikely when there is much loss of tissue and the surrounding parts have become deeply infiltrated; but this is too late to render much service to the patient. An early diagnosis is very necessary, and this is not always an easy matter unaided by the microscope. I have seen more than one case in which the appearance was that of a small, well defined, benign ulcer; and were it not for a sharply cut edge or overlying proliferation of granulations to arouse a suspicion of something mischievous, it would readily have passed for and been treated as a benign ulcer of the cervix. It is perhaps superfluous to say that every possible means should be called to our aid to establish our diagnosis, and that in the early stages of the disease nothing can help us so much as the microscope. Without it, the over-anxious would do many needless or too severe operations; and the less zealous would neglect all measures, or rely upon too mild ones, for the proper treatment of the case.

5. Sometimes the physician delays operative interference, even though the diagnosis has been made early, from a disbelief in the power of any remedial agencies in this disease. To such I would say that there is surely nothing to be gained by non-interference; and when such results can be shown as have been reported by Drs. T. A. Reamy and J. Marion Sims of this country, or by Fremnd and Schröder in Europe, it would seem as though it were a question that would decide itself in the mind of every honest practitioner.

If the objection be raised that possible mistakes in diagnosis may have been made in cases reported, I would refer such objectors to the cases cited by Dr. Reamy. No one can read them and not be impressed with the exceeding care taken to verify his diagnosis by means of the microscope. It certainly is not likely that any of the observers above mentioned would fall into error, or fail unquestionably to establish the diagnosis in any doubtful instance. In all the cases presented in this paper where operative means were used, the diagnosis was verified by the microscope. It was also done in very many of the cases not subjected to surgical treatment.

It was my privilege to see one unreported case of Dr. Sims' nine years after the removal of the diseased mass. There was not the slightest indication of any return of the disease. Of the seven cases reported by Dr. Reamy, one was living and well and to all appearances entirely free from the disease *twelve* years after its removal by operation.

The surgeon who has doubts in regard to the benefits to be derived from operative means in these cases, had better by all means let them alone, as his operation is almost sure not to be followed up to the extent necessary; and his patient will therefore not receive a fair compensation for having undergone it. A return of the disease, of which, under these circumstances, there is every probability, will discourage both.

This naturally leads us to the consideration of a theory which has alike interested the pathologist and the clinical observer for many years, viz., *the local origin of cancer*. In this theory, judging from a clinical stand-point, I am a firm believer. I would not be understood to say that all cases of cancer have a localized development from some source of irritation; for I am sure some cases show a constitutionality from the first. In these, the hereditary tendency is most marked; but even in these a localized irritation is the point which is oftentimes first seized upon to manifest the constitutional taint. But I believe that in the large majority of cases of cancer, some local irritation, oftentimes long continued, is the starting-point of the disease, and that from this the constitution, after a longer or shorter time, becomes affected. In the *Medical Times and Gazette* of London, for January 22d, 1881, there is a most interesting article on this subject by Jonathan Hutchinson, F.R.C.S., which, though written some years before, was first published under that date. The author, by way of illustration in support of his theory, cites cancer of the lip from the constant irritation of smoking; chimney-sweep's cancer from want of cleanliness and irritation of the soot, and other equally forcible examples. I must add that I know of no more frequent cause of cancer of the cervix uteri than the persistent irritation to which the everted lips of a lacerated cervix are exposed; and if the only thing to be gained by Emmet's operation for the repair of such a condition were to diminish the tendency to the establishment of the disease of which this paper treats, I would perform it in every instance where the rupture was sufficient to allow any eversion.

In several of the cases here offered, this cause of the disease was well shown; and in one of them (being one of the two where the wound was closed by silver sutures after the operation), the disease actually developed while the patient was under treatment for an extensive bilateral laceration of the cervix, preparatory to Emmet's operation.

The constitutionality of the disease from the start was markedly illustrated in but one of the cases, and that is so interesting that I report it in full:

Mrs. S. J. consulted me October 25th, 1879. She was thirty-five years of age, had been married fifteen years, and had had four children and one abortion. Her family history on the father's side was good. There was a tendency to phthisis on the mother's side, though the mother herself died of cancer of the womb. The patient had had at no time any severe illnesses, was much more fleshy than formerly, and had complained only nine months. During this time, however, the suffering had been considerable, especially after walking, consisting of backache and of pain beginning in the back and extending over each hip and down the groins. While sitting up, she was comparatively comfortable, nor, until three or four weeks before I first saw her, had driving caused any discomfort. She could not walk or stand, on account of the extreme bearing down thereby occasioned; and, when in the recumbent position, there was much distressing pain, sometimes bearing down in character like labor pains, and sometimes only a weary, aching feeling. The only position approaching comfort, when lying down, was that on the right side with the knees drawn well up. Menstruation began at fourteen years of age, and had been natural and regular, except that latterly the amount had been less than usual. She had suffered from no leucorrheal discharge. Physical examination showed an ulcer on the posterior lip of the cervix, extending nearly to the vaginal junction, which might easily have been mistaken for one of non-malignant character. There was, however, slightly overhanging the healthy mucous membrane, around nearly the whole of the ulcer, a proliferation of tissue which looked rather suspicious. A portion of it was removed and submitted to Dr. E. G. Cutler, who examined it microscopically and at once decided that it was epithelial cancer (Fig. 3). The patient was etherized November 6th, and, with the assistance of Drs. Cutler, Davenport, and Bates, the posterior lip of the cervix uteri was removed with the uterotome, the incision being carried quite up to the os internum, and the thermo-cautery was applied to the denuded surface. The portion thus cut away was again examined under the microscope by Dr. Cutler, who reported that the entire disease had been removed, as the cut surface looked perfectly healthy. The patient was kept moderately comfortable after the operation by the subcutaneous use of morphine. The chief discomfort arose from the

necessity of maintaining the recumbent position, as previously described. The temperature was 99.5° most of the time. Within a month after the operation, she suffered so much from increased distress in lying down that, in consultation with Dr. F. Minot, a thorough examination of the abdomen was made under ether, which revealed a mass of indurated tissue in the epigastrium, about the size of the fist. It was evidently the appearance of the disease in this locality. A vaginal examination showed no recurrence in the uterus. About the same time, the right leg became edematous, and in a few days the patient returned to her home in Worcester, Mass., where she died February 12th, 1880. The

Fig. 3.

following is from an account of the autopsy made by Dr. W. H. Workman, in whose care she then was: "The disease involved, besides the uterus, the lumbar and iliac glands of the right side of the pelvis, and the pancreas. The mesenteric glands were not affected, nor the liver, kidneys, spleen, or stomach. The organs of the chest were healthy. The diseased mass was nodulated and composed of cheesy masses, some of them as large as beans, and surrounded by infiltrated tissue and fat. The disease surrounded and pressed upon the right vena cava and iliac veins.

I should say from its uniform distribution that it commenced at several points, and involved most of the parts attacked at about the same time, as no one part seemed older or more degenerated than another. The largest mass was that felt in the epigastrium, where the glands are most abundant."

Could we feel sure of the constitutionality of the disease in

any given case, we should by no means advise operative interference, as we thereby put upon the patient an added strain to that already existing from the disease, without any hope of its eradication, even though, as in the case just cited, we are able entirely to remove its local manifestation at one point.

There is a popular opinion among the profession that the peritoneum will so protect itself by localized inflammation and lymph formation that there is little or no danger of the peritoneal cavity being opened as the disease advances. This opinion is not, however, verified by clinical experience. In one of the cases here reported, not only was there an opening of the size of a silver quarter of a dollar into the upper vagina from the peritoneal cavity, but also an opening into the ilium, so that there was a constant fecal discharge from the intestines into the vagina through the peritoneal cavity. Moreover, in several other cases, where this cavity was purposely or accidentally opened, the disease was found to have extended quite up to the peritoneal membrane without involving it, and without the slightest evidence of protection from any lymph deposit. The danger from opening the peritoneal cavity has been greatly overestimated. In five of the cases cited, it was either done deliberately, as a necessity in order to remove the whole disease, or accidentally, in my attempts, while operating, to keep outside of it. Yet only once was it followed by any complication, which was a slight attack of pelvic peritonitis. The details of this case are as follows:

Mrs. G. T. F. first consulted me October 15th, 1879. She was forty-two years old, and had been married twenty years. She had had one child thirteen years before; and, within four years after its birth, two abortions had occurred. The patient's occupation was the charge of a sewing-room, and she herself ran a sewing machine for ten years. Her general health had always been excellent. Three years before, she first began to suffer from a bearing-down pain, which still persisted. In addition, she complained of a constant pain in the back and in the left side of the abdomen, sometimes sharp and darting in character, at other times a dragging ache. She also suffered from pain in the left breast and from a pulling about the umbilicus. There had been leucorrhea for three years, much worse for the year previous to my first observation of the case; the discharge during that time having been yellow, sometimes bloody, but never offensive. Nothing specially abnormal was noted in regard to menstruation. She had been treated for cancer by a homeopathic physician for nearly a year. A section of the disease, removed and examined microscopically by Dr.

Cutler, was pronounced cancer. Physical examination showed the disease apparently confined to the cervix and possibly the lower part of the body of the uterus, the vagina not being implicated. On November 8th, the operation, as previously fully described, was done, Drs. F. H. Davenport and C. P. Strong assisting. In following up the disease, however, into the body of the uterus with the uterotome, after having separated the supravaginal portion, the peritoneal cavity was opened. It was immediately closed with two silver sutures, which were cut off short, and left. Another interesting incident of this case was that, in cutting out the funnel-shaped portion of the body of the uterus, the vascular network just outside the body in the cellular tissue of the broad ligament was cut into. For a few moments, the hemorrhage was so great that the cautery proved quite ineffectual to control it; and tents of styptic iron cotton were used after Sims' method, the remaining denuded surface being thoroughly cauterized. Within forty-eight hours, the patient developed pelvic peritonitis, the attack being ushered in by a slight chill, and the temperature ranging during the next few days as high as 101.5°. Treatment by morphine was carried nearly to the point of narcotism and there maintained until November 19th, when the temperature dropped to 99°. The styptic cotton was removed on the eighth day. It requires to be left so long, because, when applied after searing the denuded surface with the cautery, it seals itself to the eschar so tightly that any attempt to remove it before the slough caused by the cauterization separates, may occasion secondary hemorrhage. There is no danger of septic absorption in leaving it in place for the time mentioned; because the absorbing surface has been destroyed by the cautery, and the iron cotton, under these circumstances, does not become foul. On December 7th, this patient reported at my office, and examination showed a cropping out of the disease as large as a bean, about the central portion of the remains of the uterus. A few days later, under ether, this small epithelial mass was thoroughly removed with the curette, and its base cauterized with the thermo-cautery. The patient remained a few days in bed, and then resumed her work in the shop, where she has since continued to be employed. She has been examined at intervals of one or two months up to the present time, and there has not been the slighest evidence of any further recurrence of the disease.

The point of the operation where the peritoneal cavity is most likely to be accidentally opened is at the upper part of the supra-vaginal cervix, when working with the scissors posteriorly; or when the uterotome is substituted for the scissors in cutting out the conical portion from the body of the uterus, as shown by the line A B in the diagram (Fig. 4), which, under the influence of traction at the time of the operation, becomes nearly straight.

The importance of following up the operation by frequent examinations and by the removal of any subsequent outgrowths or reappearances of the disease, is well illustrated by a comparison of the two following cases:

July 7th, 1879, I was called in consultation by Dr. Samuel W. Torrey, of Beverly, Mass., to see Mrs. Z. H., who was forty-one years of age, and had been married sixteen years. She had had three children, the youngest being eight and a half years old. She had also had one abortion six years before. She gave a good family history, and her own general health had been excellent. For some months she had suffered from a leucorrheal discharge

FIG. 4.

which latterly had become excessive and foul. For two weeks previous to the time of my first observation of the case, she had complained of backache. Menstruation appeared when she was fourteen years old, and recurred regularly each three weeks afterwards until within six months, when the intermenstrual period had been shortened a few days. This function was otherwise normal. The bowels were constipated; the micturition was too frequent, and for two months some aching had followed the act. Physical examination revealed epithelial cancer affecting the whole cervix uteri. The patient was etherized July 11th, and, assisted by Dr. Torrey, and Dr. Johnson of Salem, I removed the diseased mass and also a conical-shaped portion from the supravaginal cervix, and applied the thermo-cautery to the denuded surface. Under Dr. Torrey's care the patient made a good recov-

ery from the operation. In the latter part of August, however, he reported that the disease had returned. September 1st, the patient was again etherized. I found the remaining portion of the supra-vaginal cervix thoroughly diseased, breaking down under the touch. The lower portion of the body was also affected and the posterior vaginal wall had become infiltrated. Assisted by Dr. Torrey and Dr. F. W. Johnson of Boston, I performed the operation as fully described in the early part of this paper, removing also a portion of the upper vagina posteriorly, half as large as the palm of the hand, in order to include all the diseased tissue. The peritoneal opening was closed with eight silver sutures and the cautery applied. Dr. Torrey reported a most excellent recovery, the temperature never rising above 99½°. He removed the sutures on the eighth day. In March, 1880, he wrote me that there was a slight recurrence of the disease over a space about twice the size of the thumb nail, and that he had urged the necessity of immediate interference. The patient absolutely refused to have anything further done, and died February 1st, 1881, under the care of a homeopathic practitioner, who assured her friends that the disease was nothing more than an ordinary polypus and the operations she had undergone had been uncalled for.

Mrs. A. A., of English birth, was referred to the Free Hospital for Women, October 1st, 1880, by Dr. Belt of South Boston. She was thirty-six years of age, and had had five children and one abortion. Dr. Belt had delivered her three months before, and at that time diagnosticated cancer of the posterior part of the cervix. This was the occasion of a severe hemorrhage two hours after delivery was effected, which was done without the use of instruments. There had been more or less flowing since the labor, varying in amount from two to twelve saturated napkins daily. Clots were frequently discharged. Six months before the birth of her last child, a foul leucorrheal discharge appeared and had since continued. She had not suffered much pain, but complained of a general tired feeling. Menstruation had been normal up to the last pregnancy.

Physical examination showed a mass of epithelial growth so nearly filling the vagina that it was impossible to determine how extensively the surrounding parts were affected. I felt tolerably confident, however, from the movability of the whole mass together with the uterus, that the cellular tissues of the broad ligaments were not implicated. The patient was etherized October 7th, and a considerable portion of the upper posterior vaginal wall was found involved in the disease. The operation was performed as previously described, the whole of the disease as detected by the touch and sight being removed. The large opening into the peritoneal cavity was closed with a continuous silver suture. The day following the operation the temperature rose to 103.5° and the pulse to 120; but both became normal on the fourth day, and remained so for most of the time afterwards. The recovery was good, the patient being up on the seventeenth

day. Within two months there was a slight cropping out of the disease, which was at once removed and its base cauterized. She has been examined each month since and remains perfectly well. She menstruates very slightly. The uterine cavity was measured last June and found to be barely three quarters of an inch in depth, showing that a considerable portion of the body of the uterus had been removed.

In these two cases, I see no good reason why as much might not have been done for the first as for the second, if, the great part of the work having been already accomplished, we had been allowed to follow up the disease by a very simple operation.

When the disease is limited to either part of the cervix, the whole cervix should be removed on account of the greater tendency to return quickly in the remaining portion of the lower segment of the uterus. This has been my experience in three instances, and is also shown in one of the cases figured in the article by Dr. Sims, before referred to. The following case well illustrates my point:

Mrs. S. J. consulted me Jan. 30th, 1880. She was fifty-five years of age; and had been married thirty years. She had had two children, aged twenty-six and twenty-five years respectively. There had been five abortions, three of them occurring before the birth of any child, and two after the birth of the younger: some of them had resulted accidentally and others were procured. Her family generally were long-lived. Its history showed a tendency to rheumatism. One sister had died of "cancer of the bowels." The patient's own general health had been good. Menopause occurred nine years before. Two months before she consulted me, while taking a vaginal douche, she saw blood returned in the water of the injection. Greatly alarmed, she consulted her physician, who told her there was a "small growth, smooth, round, pink, and the size of a green grape, just on the lip of the os." He advised its removal, to which end applications of caustic were made for some time, but without effect, save that every interference caused bleeding. A specialist was called in consultation, and her condition was spoken of so guardedly as to lead her to fear malignant disease. She had suffered no physical pain, but her anxiety had been very great. There had been no leucorrheal discharge whatever till within six months; and during this time only very slight in amount, though occasionally faintly streaked with blood. From a portion of the growth examined by Dr. Cutler, an undoubted diagnosis of cancer was made. Jan. 31st, 1880, the patient was etherized; and, assisted by Drs. Davenport and Smith, I performed the operation as described, except that I limited it to the posterior half of the cervix and lower part of the body of the

uterus. The patient made a good recovery, with the exception of an attack of acute cystitis. The temperature never rose above 99°. On June 30th, the anterior portion of the cervix, which had been left, offered the same appearance formerly present posteriorly, though less extensive. Under ether, the operation was repeated anteriorly. The recovery was uncomplicated. The specimens removed were each time submitted to Dr. Cutler and pronounced cancer, though he was not quite sure after the first operation that the whole disease had been removed, as the affected portion infringed so closely upon the cut surface at one point. The patient has been examined each month or two since, and there has been no evidence of any return of the disease.

Why there should be a greater tendency to its recurrence in the remaining portion of a cervix has greatly interested me. The only explanation I can offer is, that the contracting cicatrix about the remnant of the cervix tends to strangulate it, thereby interfering materially with the venous return. A passive congestion results, which, together with the friction of the vaginal walls upon the hyperemic cervical membrane of the remaining portion, keeps up a constant irritation upon an unprotected surface, precisely what we oftentimes see in an extensive bi-lateral laceration of the cervix uteri.

Although unable always to remove the disease entirely, much may be done, as Dr. Sims has shown, for the comfort and temporary relief of the patient. All sloughing tissue and vascular excrescences may be removed with the curette; and this, followed by the thorough application of the thermo-cautery, will render the condition far more endurable.

Mrs. F. J. consulted me in September, 1879, on account of a profuse leucorrheal discharge of a year's standing. This she described as very offensive and variable in color, being sanguineous, yellow, or greenish. In spite of three or four vaginal injections daily, constant protection was necessary. Her husband complained that this discharge had occasioned him an attack of urethritis. She was forty-seven years old, had been married twelve years, had had one child nine, and one abortion seven, years before. The family history showed phthisis on the father's, and cancer on the mother's, side. For four months she had suffered a great deal of pain in the left side, extending through to the small of the back. Exercise greatly increased the pain. Although a woman of a great fortitude, it would often tire her out completely. At such times, an additional pain seemed to extend down the legs, even to the ankles. The full extension of the legs caused great pain in the abdomen. Any attempt at coitus invariably occasioned a flow of blood. Cachexia was well-marked. Nothing

abnormal was noted in the menstrual history. A physical examination revealed the uterus fixed, and the whole left broad ligament and vaginal cul-de-sac of the same side thoroughly infiltrated with the disease, while the whole cervix uteri had sloughed away, leaving a considerable excavation into the body of the uterus. The vaginal walls in the whole upper half were implicated, and were sloughing wherever the disease approached the cervix. The patient was etherized Oct. 16th, 1879, Dr. Davenport assisting. The operation advised for cases in which it is found impossible to remove the entire disease was done. For about two months the patient was wholly free from any discharge, and was greatly relieved from pain, which, however, still persisted to some extent in the left hip. After that length of time, both the discharge and the pain gradually returned. She was disheartened and would have nothing more done, which, in her case, could certainly not be urged. She died in July, 1880.

The advantages claimed for the method of operation described in the early part of this paper are:

1. More of the uterus can be removed than by any other previously described method where any of it is left.

2. All subsequent disturbance of the patient for the changing or removal of dressings, or for examination of the parts, is unnecessary until complete convalescence is established.

3. The operation is less severe, and consequently accompanied by less danger, than any of those for the removal of the whole organ.

4. The steps of its performance are more simple and easy than in those operations where the total extirpation of the organ is practised. It is, therefore, more practicable for the general surgeon.

5. The length of respite from the disease is greater than in any cases known to me where the entire uterus has been removed.

In review, I would present the following:

1. In all uterine cases, do not neglect to remove all sources of local irritation, especially lacerations or frictions of the cervix uteri with eversion.

2. Make an early specular examination of all cases presenting any of the rational signs of cancer.

3. In all doubtful cases make the diagnosis positive, if possible, by a microscopical examination of a section removed.

4. The diagnosis of cancer established, do not delay the operation, which must be thorough, removing if possible every por-

tion of the disease, though it be necessary to open the peritoneum or the bladder to accomplish it.

5. Submit the portions removed to the microscope to be absolutely sure that all the diseased tissue has been cut away.

6. When necessary to remove any part of the cervix, remove the whole, infra- and supra-vaginal.

7. Make a specular examination of all cases operated on, every month or two for some years; and if any reappearance of the disease be discovered, do not delay the use of the sharp curette and the thermo-cautery.

8. Do not attempt a radical operation where there is evidence that the disease has been constitutional from the start, or where it has become so by a too long delay of its primary performance.